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(54) Title: METHOD FOR PRODUCING NUCLEAR FUEL PELLETS OF THE MOX TYPE

(57) Abstract: A method for producing nuclear fuel pellets of the MOX (mixed plutonium and uranium oxide) type, comprising the steps of preparing an U-pu oxide blend powder having a Pu content in excess of the finally desired value, preparing a uranium oxide powder, mixing adequate quantities of both powders in order to achieve the desired plutonium content, compacting and sintering the mixture for obtaining said pellets, wherein the step of preparing the uranium oxide powder involves the following sequence of substeps: a) preparation of an aqueous solution of uranyl nitrate to which between 0.5 and 2 wt% of organic thickeners are added such that the viscosity of the solution is adjusted to values between 20 and 100 centipoise, b) dispersion of the solution into droplets, c) introducing said droplets into a hydroxide bath, d) washing the resulting beads, e) drying the beads by azeotropic distillation using an immiscible organic solvent, f) thermal treatment of the beads in an oxidising atmosphere, g) thermal treatment in a reducing atmosphere.